REGULATION FILING AND PUBLICATION

1. Regulation Chapter Number and Heading:

   520 C.M.R. 6.00

2. Name of Agency:

   Department of Public Safety

3. This document is reprinted from the Code of Massachusetts Regulations and contains the following:

520 C.M.R. 6.01	Purpose, Scope Exceptions
520 C.M.R. 6.02	Definitions
520 C.M.R. 6.03	License Prerequisites / Requirements
520 C.M.R. 6.04	Operating Practices
520 C.M.R. 6.05	General Requirements
520 C.M.R. 6.06	Classification and Qualifications
520 C.M.R. 6.07	Hand Signals
520 C.M.R. 6.08	Conversions
520 C.M.R. 6.09	Application Procedure
520 C.M.R. 6.10	Special Requirements For Operators Hoisting Machinery
520 C.M.R. 6.11	License Suspension, and Revocation

520 CMR 6.00: HOISTING MACHINERY

6.01: Purpose, Scope, and Exceptions.

1. The purpose of 520 CMR 6.00 is to establish reasonable requirements to protect the safety of the citizens of the Commonwealth from the hazards inherent in the hoisting workplaces by establishing this Hoisting Engineers' Licensing system.

2. 520 CMR 6.00 is applicable to all hoisting machinery used on private or public property for the erection, construction, alteration, demolition, repair or maintenance of buildings, structures, bridges, highways, roadways, dams, tunnels, sewers, underground building or structures, underground pipelines or ducts and all other construction projects or facilities or other uses, on private or public grounds except when being used for agriculture. 520 CMR 6.00 shall apply to any hoisting machinery where the height of the lift exceeds ten feet or the weight of the load exceeds 500 pounds or the capacity of the bucket exceeds 1/4 cubic yard capacity. Including any and all equipment regardless of motive power other than steam not mentioned and deemed applicable by the Commissioner of the Department of Public Safety under 520 CMR 6.00.

3. The Department hereby adopts the 1998 OSHA Publication 29CFR part 1926, and ANSI B30.5, 1998 edition.

6.02: Definitions

Death. In the event of a death occurring in which hoisting machinery is involved, the Department of Public Safety, District Engineering office must be notified within one hour of the accident and the scene of the accident must not be disturbed except for the removal of the dead or injured persons until approval is granted by the Department of Public Safety at (617) 727-3200.

Injury Records. A listing of each injury to a worker which requires either hospitalization or immediate treatment by a medical doctor or nurse shall be recorded. Such records shall be available at the project site for examination by the inspector during the full term of the project. A copy of such record shall be sent to the Engineers Section of the Department of Public Safety immediately following treatment of the injury.

License Classification. Refers to any of the four general types of hoisting licenses: hoisting, excavating, electric and air, specialty and their sub classifications, as set forth in 520 CMR 6.00 and is operated by the license holder.

Welding and Cutting. All welding and cutting on hoisting machinery shall be performed in accordance with the requirements of 1998 Section IX of the American Society of Mechanical Engineers (A.S.M.E.) Code.

6.03: License Prerequisites/requirements

1. All applicants must be at least 18 years of age.
2. All applicants must possess a valid and current drivers license to operate a motor

vehicle.

3. Applicants for a hoisting operator license shall be required to pass a written examination. At the inspecting engineer's discretion, it may be deemed necessary that a practical examination will also be administered for the specific type of equipment for which they have applied to operate, according to Massachusetts General Laws, 520 CMR 6.00, OSHA Regulation 1926, ASME and ANSI B30.5
4. Applicants taking the practical examination must:
   a) Demonstrate the ability to operate the equipment for which they are being examined.
   b) Demonstrate the ability to comprehend and interpret all placards, operators' manuals, safety codes and other information pertinent to safe hoisting operations.
   c) Demonstrate the ability to communicate in applicable language, when signals and instructions are by radio.
   d) Possess knowledge of emergency procedures.
   e) Possess knowledge of Massachusetts General Laws and regulations as they relate to hoisting equipment.
5. All applicants shall produce D.O.T. certificate documentation that they meet the criteria for a D.O.T. medical examination or 1998 ANSI B30.5 qualifications for operators.
6. All licenses required by law shall be carried by the operator for inspection by any person lawfully entitled to such inspection.
7. Signal people of hoisting and material handling equipment shall be properly trained.

Applicants who do not have the minimum qualifications for the license they seek will not be examined. Any applicant who is denied an examination for failure to have the necessary qualifications may appeal to the Chief, who shall appoint three inspectors of the division, or himself and two inspectors, to act together as a board of appeal. Appeals are taken pursuant to Chapter 30A adjudicatory proceedings. The decision of the majority of the members of the board shall be final. Questions about the applicability of a particular license to specific hoisting machinery in any case should be refereed to the Department of Public Safety, Boston, MA (617)727-3200 or 1-800-223-0933

6.04: Operating Procedures

1. The operator shall not engage in any practice which will divert their attention while actually engaged in operating the hoisting equipment.
2. When an operator is physically or mentally unfit, they shall not engage in the operation of hoisting equipment.
3. Prior to starting any hoisting equipment, the operator must make a complete walk around the equipment to verify people are clear of the equipment, and that it is in a safe condition.
4. Prior to operating hoisting equipment with a rotating superstructure, barricades, warning lines or other approved procedures must be used to prevent entry into a swinging superstructure's radius.
5. All controls shall be tested by the operator prior to operating the hoisting equipment. If any controls are found to be functioning improperly, they shall be adjusted or repaired before the equipment is used.

6. All operators shall respond to signals only from a trained signal person.
7. The operator shall be responsible for those operations under their direct control. When there is any doubt as to the safety of any action, the operator shall have the authority to stop and refuse to handle loads until safety has been assured. No person shall lose their position of employment as a result of complying with 520 CMR 6.00.
8. If a warning signal is furnished, it shall be sounded each time before traveling, and intermittently during travel, particularly when approaching people.
9. The operator will be responsible in securing any unattended hoisting equipment in accordance with applicable Standards.
10. If power fails during operation of any hoisting equipment, the operator shall secure the machine and comply with 520 CMR 6.04 (9) prior to leaving the equipment. When practical, suspended loads shall be landed under brake control.
11. At no time shall persons work under a boom or a load suspended thereon, in accordance to: {O.S.H.A. Publication 29 C.F.R. part 1926.550 (a) (19)}.

6.05: General Requirements

1. Hoisting Machinery All hoisting machinery will be operated according to manufacturers specifications.
   a.) Designated Persons. All equipment for handling hoisting and moving materials shall at all times be operated by a duly licensed person.
   b.) Maintenance. Maintenance, repair and refueling shall be done when the machine is inoperable and secure.
   c.) Required Inspections. Visual inspection shall be made daily of wire ropes, bearings, gears, friction clutches, brakes, chain drives and other parts subject to wear on all hoisting equipment to insure against development of unsafe conditions. A daily log sheet shall be available to any inspector of the Division during the useful life of the machine.
      i) In addition to the above daily inspections a thorough inspection shall be made at intervals of not more than 90 days by a duly licensed person.
      ii) A written and signed record of this thorough inspection shall be kept and made available at the site for examination by any inspector of the Division.
      iii) Inspection and repair of booms shall be made only when the boom is lowered and adequately supported.

   NOTE: In the event that a piece of equipment has not been used for 90 days or more, the above “thorough inspection” need not be performed until the day that the equipment is again put back into use.

2. Special Requirements for Cranes
   a) Loading. Material moving, handling or hoisting equipment shall not be loaded in excess of the live load for which it was designed as specified by the manufacturer.
      i) Manufacturers’ load-rating plates or load charts shall be attached to all load-hoisting equipment in clear view of the operator.
      ii) Rating plates or load charts for boom cranes shall clearly indicate the safe load for maximum and minimum positions of the boom and for at

least two intermediate positions.

iii) All manufacturers load charts and operation manuals shall be kept in the machine.

b) Boom Stops. Devices to prevent the boom from falling over backward shall be provided on cranes. Cable boom stops by themselves shall not be considered as adequate for this purpose.

c) Speed Controls and Stops. Material moving, handling or hoisting equipment operating on rails, tracks or trolleys shall be equipped with speed controls and shall have positive stops or limiting devices to prevent overrunning safe limits.

d) Equipment Modifications. All modifications, extensions, replacement parts or repairs of equipment shall maintain at least the same factor of safety as the original designed equipment. Modifications which affect the safe operation must be approved by a Massachusetts Registered Professional Engineer skilled in the discipline as well as in stress analysis.

e) Protection of Operator. The operator of material handling and moving equipment when exposed to overhead hazards or the elements, shall be protected with a cab or equivalent covering affording adequate protection but which shall not cut off his vision of the load movements.

i) Glass windows on such equipment shall be of a shatterproof type.

ii) The area occupied by the operator shall be heated in cold weather.

f) Required Presence. Operators of material moving, handling or hoisting equipment shall remain at the controls while the load is suspended. The operator of the machine shall not leave the machine while the master clutch is engaged.

g) Erection or Dismantling. Crane erection or dismantling shall be performed in accordance with the manufacturer's specifications and under the supervision of his representative or other persons experienced in erection and/or dismantling of this type of equipment.

h) Factor of Safety. All parts of the crane and supports shall be designed, constructed and maintained to withstand all stresses resulting from intended use with a safety factor of not less than 2.0.

i) Capacity Schedule. Each crane model shall contain a schedule of load capacities in the operator's station at all times. A second schedule of load capacities should also be made available to supervisors.

j) Load Limit Device. Each crane manufactured or equipped with an approved load limit device shall at no time be readjusted to permit handling of greater loads than intended by the manufacturer for the various boom radii.

k) Swing Control. Each crane shall be equipped with a mechanism which will cause the boom swing to be started and stopped in a manner sufficiently gradual to prevent damaging effects of torsion on the crane.

l) Required Brake System. Each crane shall be equipped with a brake system or equivalent which will effectively prevent any movement when the power is lost or at any other time not desired by the operator.

m) Required Safeguards. Parts of the crane in which workers are required to reach for inspection, adjustment or maintenance shall be provided with access walkways, ladders, handholds or footholds, safety lines, or other safeguards as necessary to eliminate the hazards of workers falling from the

crane.

3. Special Requirements for Derricks
   a) Construction. Derricks shall be constructed of metal or select structural Douglas Fir, with proper steel braces and fittings. Cast iron shall not be used for members or parts subject to tension or torsion.
   b) Guying. The top of a guy derrick mast more than 25 feet in height shall be secured by not less than six wire rope guys so spaced as to make the angles between adjacent guys approximately equal.
      i) Wire rope guys shall be secured by either weldless steel sockets, thimble and splice connections, thimbles with proper size and number of clips or steel guy plates having grooved bearing surfaces of the same shape and size as the wire rope thimbles.
      ii) Guys shall be secured to strong permanent construction or to substantial "Dead Men" securely anchored in the ground.
      iii) Safety bolts or equivalents shall be placed on guy turnbuckles to prevent unwinding when guys are under tension.
   c) Required Inspection. Guys, cable clamps and other rigging shall be checked at the beginning of each work day and before making any lifts that are near the capacity of the rig.
      i) Frequent checking by a duly licensed person of lead cables and mast foot blocks shall be performed to insure that cables are not crossed or fouled.
      ii) Lead line blocks shall be checked frequently to insure that they are properly secured. Leads shall be so arranged as to minimize tripping hazards.

4. Special Requirements for Pile Drivers.
   a) Supervision. Each member of the pile driving crew shall be properly instructed in his work and the operation shall be in charge of a competent person who shall direct the work and give the operating signals.
   b) Inspection. All pile driving equipment shall be inspected daily before the start of work by a duly licensed person and all unsafe conditions and defective parts shall be corrected before beginning operations.
   c) Driver Not in Use. When the pile driver is not in use, the hammer shall be chocked or blocked in the leads or lowered to the ground.
   d) Temporary Interruption. The operator of every pile driver shall remain at his post when the driving is interrupted until the hammer has been chocked or blocked in the leads, or has been lowered and is resting on a driven pile or on the ground.

5. Lift Trucks. Only a duly licensed operator shall operate a lift truck. No lift truck shall be loaded beyond its capacity rating.
   a) Brakes. Every power operated lift truck shall be equipped with adequate wheel brakes.
   b) Operation. No lift truck used in delivering materials to elevated platforms shall be operated at unsafe speeds while the load is being hoisted or transported.

6. Special Requirements for Excavating Machines, including backhoes and frontend loaders.
   a) Dig Safe. Prior to any excavation Dig Safe and other utilities must be notified.
   b) Protection of Operator. Where the operator of an excavating machine may be exposed to the elements or overhead hazards, a suitable equipped cab for protection against such conditions shall be provided.
   c) Operation. Excavating machines shall be operated by a duly licensed person.
      i) S.A.E. hand signals will be used with excavating machinery.
      ii) No person except the operating crew shall be permitted on an excavating machine while it is in operation.
      iii) No person other than the pitman and excavating crew shall be permitted to stand within range of the back of an excavator or backhoe or within range of the swing of the bucket while the shovel or backhoe is in operation.
      iv) Excavating machinery shall not be allowed to straddle an open trench.
      v) No person shall begin excavating until all gas lines, electrical lines or other utility lines have been exposed and made visible to the operator using manual means.
      vi) In the event a gas line, electrical line or other utility line has been struck by the excavating equipment, the operator shall notify the Department within one hour of the incident.
   d) Swing Radius Protection: Refer to O.S.H.A. Publication 29 C.F.R. 1926.21 B.2.

7. Special Requirements for Rigging.
   a) Restricted Use. Wire rope shall be used with power driven hoisting machinery. Other ropes may be used with winch heads, capstan hoist and roofers hoist.
   b) Splicing Restrictions. The joining of two or more sections of wire rope for suspension service is prohibited, unless approved fastening devices are used.
   c) Clips Attachment Method. Clips shall never be staggered and at no time shall the "U" bolt of the clip clamp on the live end of the rope. The "U" bolt of all clips shall clamp on the dead end or short end of the rope.
   d) Chains. Chain slings are allowed so long as they are in accordance to O.S.H.A. 1926.251
   e) Required Inspections.
      i) Daily. A visual inspection of all wire rope, sheaves, chains and drums shall be made daily at the commencement of operations.
      ii) Monthly. A thorough inspection shall be made by a duly licensed person of rigging sheaves, ropes and chains before use and such inspection shall be repeated every 30 days when in use. An inspection form will be made out and kept on file. The form shall clearly identify the unit being inspected and shall be retained for the life of the object that was inspected. NOTE: All rigging will be done according to O.S.H.A. Publication 29 C.F.R. 1926.

8. Special Requirements for Material Platform or Bucket Hoists

a) Written Approval. No material platform or bucket hoist shall be put in use on any construction or demolition operation until written approval has been received from the Department of Public Safety or the Inspector having jurisdiction. The approval, in certificate form, shall be posted in a conspicuous place in the enclosure housing the hoisting mechanism.

b) Construction of Hoist Towers. Hoist towers shall be erected and dismantled in a safe and workmanlike manner under the direct supervision of competent/qualified persons.

c) Footing. Hoist towers and hoisting engines shall be supported by a level pad of necessary strength and dimensions to adequately distribute the maximum loads so as not to exceed the safe bearing capacity of the soil upon which they bear.

d) Bracing. Hoist towers shall be plumb and shall be securely braced to insure stability and rigidity.

i) Hoist towers shall be secured or anchored to a building or structure at intervals of two floors or not more than 26 feet with adequate bracing at all four corners.

ii) Hoist towers built independently of a building or structure shall have substantial guy anchorage at each corner post at intervals of not more than 26 feet.

iii) Wire rope used for securing or guying a hoist tower shall be not less than ½ inch in diameter.

iv) Hoist towers shall be erected to a height necessary for minimum needs and extend in height only when construction work has progressed sufficiently to provide for the proper anchorage and bracing required herein.

e) Required Clearance. There shall be a least four feet of clearance between the cathead sheave and the hoisting rope fastening on the car or bucket when the conveyance is at the uppermost terminal or landing.

f) Chicago Booms. Hoist towers to which hoisting booms are attached shall be erected and braced in sufficient strength to safely sustain the maximum working load on the boom as well as the designed load capacity of the tower.

g) Enclosure of Hoists. Exterior and interior hoists shall be enclosed on all sides except as follows.

i) At entrance openings to hoist ways.

ii) On exterior hoist towers and on exterior cantilever hoists where the hoist platform is totally enclosed and the base of the hoist is similarly enclosed to a height of a least seven feet.

h) Operation of Hoist The operation of every hoist shall be controlled by a signal system.

i) There shall be a trained signal person at all loading and unloading points.

ii) Hand signals shall not be used in the operation of platform hoists.

iii) Operators of hoisting engines shall not at any time perform simultaneously the operation of more than one hoist drum. When one drum is in operation, all others shall be dogged off.

iv) Riding Prohibited. No person shall ride any belt, bucket or load being moved by any cable way, conveyer or hoisting machinery.

9. Special Requirements for Signal Systems
   a) Hoisting Equipment. Hoisting equipment shall be operated in response to manual signals, telephone, two-way radio communication or a visible or audible signal code operated by an electrical plug in system. Where manual signals are used only one trained signalperson shall be designated to give signals to the operator. Manual signals may be used only where the operator and signal man have a clear and unobstructed view between their locations.
   b) Hand Signals. Hand signals as provided in this regulation shall be used whenever or wherever applicable or practical.
   c) Optional Signal System. In lieu of the signal arrangements for movement called for in 520 CMR 6.05(9)(a) and (b), the following signal system may be provided to prevent unexpected movement of any material elevator platform that a worker or other person could board at a landing. Each landing gate on material elevators shall be equipped with a positive latching device and an electrical connect so designed and installed that a circuit, which lights a colored bulb, is closed whenever all gates are closed. This bulb shall be in clear view of the operator and the elevator platform shall not be moved unless the bulb is lighted.

10. Utility Companies. Utility companies which have propelled truck mounted cranes, derricks and similar hoisting equipment which is used for the maintenance and construction of their own equipment and who have at least one supervisor who holds an unrestricted 1A-2A-3A-4A license issued by the engineering section of the Department of Public Safety and such supervisor is designated as the responsible person in charge of hoisting equipment may be exempted from the provisions of M.G.L. c. 146, 53. Such exemption shall only apply if the company or corporation has an in-service training program that is approved by the engineering section of the Department of Public Safety. The in-service training program shall be audited at least twice annually. The audits shall be approximately six months apart and on a random basis. Three district Engineering Inspectors shall conduct the audit. The company or corporation shall issue to each trained and certified person a company issued license. The license shall have a picture of the licensee, a list of the specific hoisting equipment that he has been qualified to operate and the signature of the supervisor(s) who holds an unrestricted 1A-2A-3A-4A license issued by the Department of Public Safety

11. Short Term Rental of Compact Equipment. Persons or entities in the business of renting compact equipment described in this regulation to homeowners and to other persons providing services to homeowners, or to landscaping or snow removal services, who comply with the requirements of this regulation, shall be exempt from the provisions of M.G.L.c. 146, 54A.
   a) Compact Equipment. 520 C.M.R. 6.05 (11) applies only to skid-steer loaders or any piece of equipment that the Department of Public Safety Engineering Section deems or classifies as in the skid-steer loader style category.

b) Licensure of Company Employee. The rental company employees who train renters as specified in 520 C.M.R. 6.05 shall be licensed according to M.G.L. c. 146, 53.

c) Training of Renters. The rental company must have in place a standard training program of a minimum one hour of instruction for each type of compact equipment rented. The elements of each such training program must be in writing, filed with and approved by the Department, and available on site for inspection by the Department. Prior to renting any such equipment and the issuance of a temporary license as provided in 520 C.M.R. 6.05, the person to whom the equipment is to be rented must be trained in the proper and safe operation of that equipment according to such training program, or must certify that he or she has received such training within the previous twelve months or has operated such equipment within the previous six months. A part of such training may include the viewing of a video tape.

d) Term of Rental. The rental of compact equipment pursuant to 520 C.M.R. 6.05, shall not exceed a period of 14 consecutive days.

e) Temporary License. Upon compliance with the requirements described in 502 C.M.R. 6.05, the rental company shall issue to such person a temporary license to operate the rented equipment during the rental terms (not to exceed 14 consecutive days). This license shall be on a form available from the department. The rental company shall retain duplicates of all such temporary licenses for one year, and make them available for inspection by the Department upon request. Any person operating compact equipment and who has on his person such a license shall be exempt from the provisions of M.G.L. c. 146, 53.

6.06: Classification and Qualifications

Hoisting licenses are granted according to the type of hoisting equipment to be operated by the license holder. Applicants for a hoisting operator license shall be required to pass a written or practical examination or both, as required pursuant to Massachusetts General Law Chapter 146. A grade of 70% is considered passing. The minimum qualifications for all classes of hoisting operators is as follows:

The four types of hoisting licenses are Class 1 - Hoisting, Class 2 - Excavating, Class 3 - Electric and Air, and Class 4 - Specialty. The following is meant as a general guide to license classifications:

1. CLASS 1 - HOISTING

A)

i) This license covers all friction clutch machines and all derricks (including guy derricks, stiff legs, Chicago booms, gin poles).

ii) This license covers lattice boom machinery and may also require a 3A license.

iii) This license covers all wire rope machines.

iv) This license covers all equipment listed in classes 1B and 1C.

v) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.

vi) Knowledge of the crane operator NIOSH hand signals is essential,

as provided for in this regulation.

vii) The applicant must be able to read and comprehend load charts and manufacturer's specifications.

B)

i) This license covers the operation of all equipment having telescoping boom and wire rope.
ii) This license covers all equipment listed in class 1C.
iii) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.
iv) Knowledge of the crane operator hand signals is essential, as provided for in this regulation.
v) The applicant must be able to read and comprehend load charts and manufacturers specifications.

C)

i) This license covers equipment with hydraulic telescoping booms and any other hydraulic equipment designed for the purpose of hoisting, excluding those with wire rope hoist lines.
ii) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.
iii) The applicant must be able to read and comprehend load charts and manufacturer's specifications.

2. CLASS 2 - EXCAVATING

A)

i) This license covers the operation of all crawler and rubber tired excavators and backhoes.
ii) This license covers the operation of equipment listed in classes 2B and 2C.
iii) Knowledge of hand signals for controlling crawler/excavator operations is essential, as provided in this regulation.
iv) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.

B)

i) This license covers combination loader/backhoe machines.
ii) This license covers the operation of equipment listed in Class 2C.
iii) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.

C)

i) This license covers front end loaders
ii) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.

3. CLASS 3 - ELECTRIC AND AIR

A)

i) This license covers the operation of all electric and air powered

hoisting equipment, and may also require a 1A license.

ii) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.

iii) The applicant must be able to read and comprehend load charts and manufacturer's specifications.

4. CLASS 4 - SPECIALTY

A)

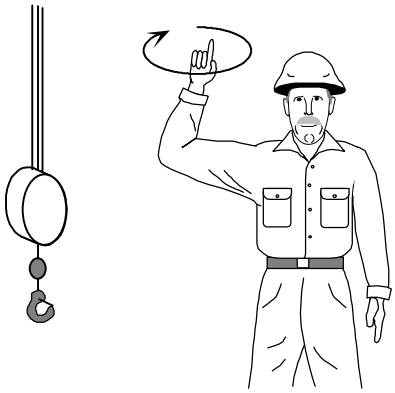
i) This license covers the following equipment:

(1)	4A - (0)	Unlimited 4A (previous 3B license)
(2)	4A - (1)	Drill Rigs
(3)	4A - (2)	Pipeline Side booms
(4)	4A - (3)	Concrete Pumps
(5)	4A - (4)	Catch Basin Cleaner
(6)	4A - (5)	Sign Hanging Equipment
(7)	4A - (6)	Specialty Lawn Mower
(8)	4A - (7)	Reserved
(9)	4A - (8)	Reserved
(10)	4A - (9)	Reserved

ii) The applicant must meet the prerequisites as listed in 520 C.M.R. 6.03.

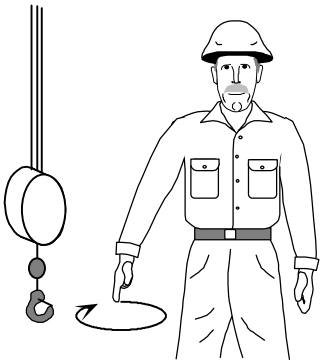
6.07: Hand Signals

1. NIOSH hand Signals for Crane Operation



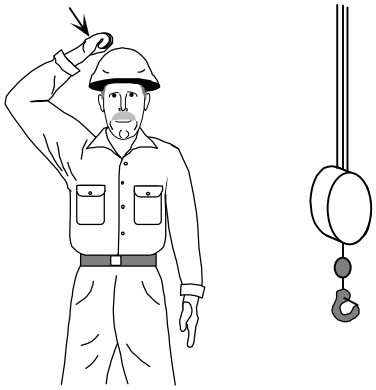
Hoist

With forearm vertical, forefinger pointing up, move hand in small horizontal circle.



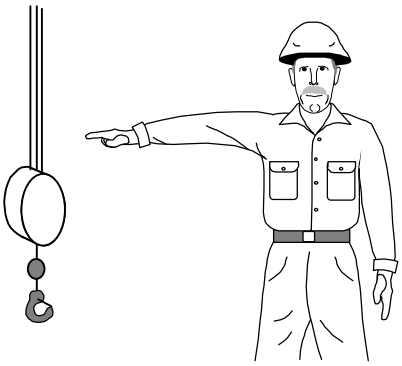
Lower

With arm extended downward, forefinger pointing down, move hand in small horizontal circle.



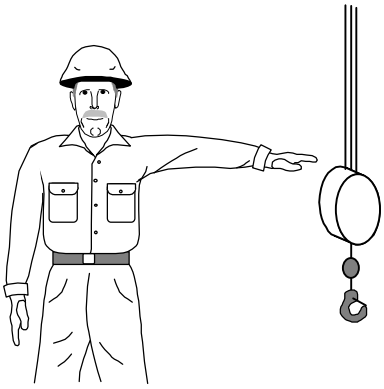
Use Main Hoist

Tap fist on head, then use regular signals



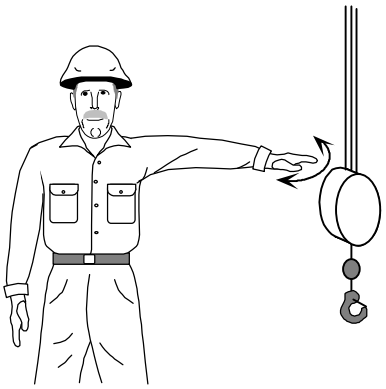
Swing

Arm extended point with finger in direction of swing of boom



Stop

Arm extended, palm down, hold position rigidly

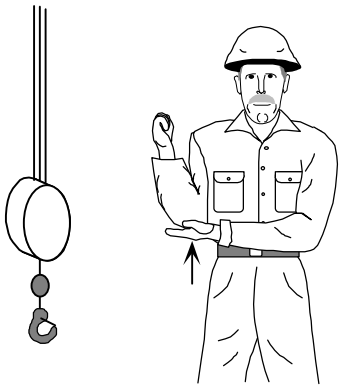


Emergency Stop

Arm extended, palm down, move hand rapidly right and left.

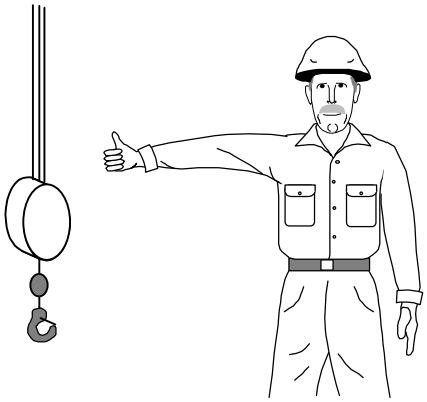
6.07: continued

(1) NIOSH hand Signals for Crane Operation



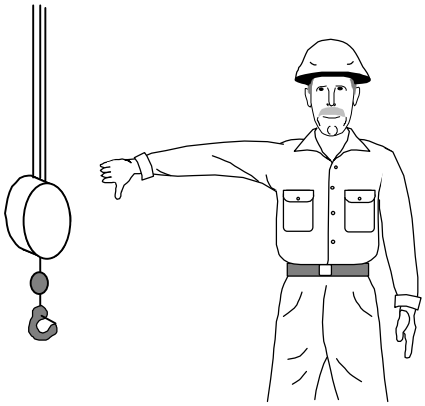
Use Whipline

(Auxiliary hoist) Tap elbow with one hand then use regular signals



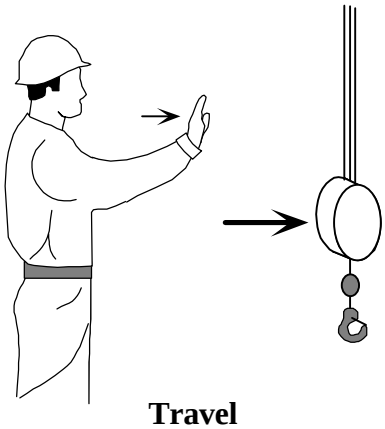
Raise Boom

Arm extended, fingers closed, thumb pointing upward.



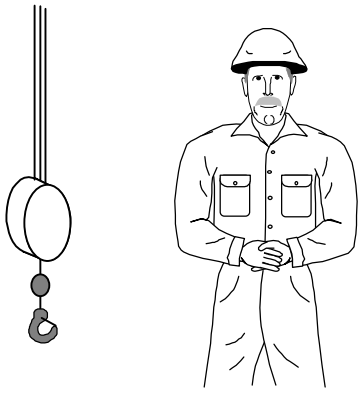
Lower Boom

Arm extended, fingers closed, thumb pointing downward



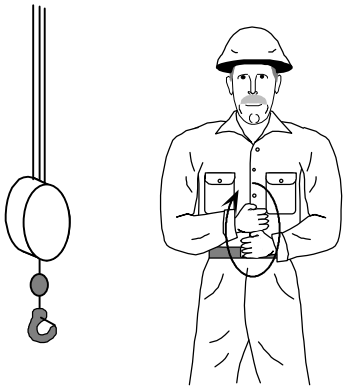
Travel

Arm extended forward, hand open and slightly raised, make pushing motion in direction of travel.



Dog Everything

Clasp hands in front of body

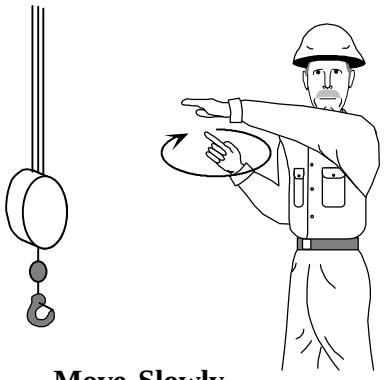


Travel

(Both tracks) use both fists in front of body, making circular motion about each other, indicating direction of travel, forward or backward (for crawler cranes only)

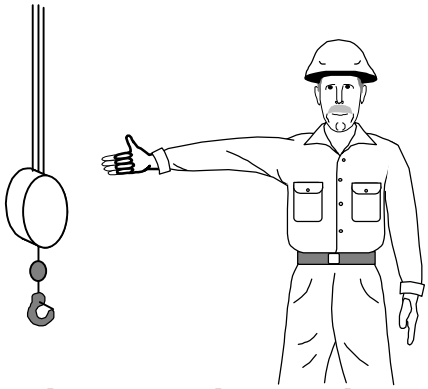
6.07: continued

(1) NIOSH hand Signals for Crane Operation



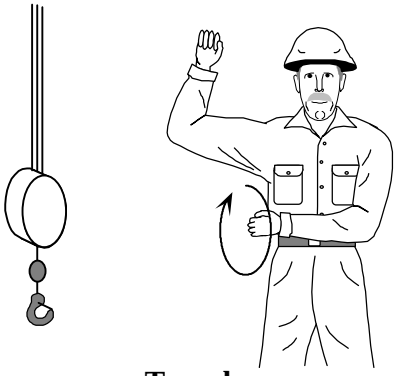
Move Slowly

Use one hand to give any motion signal and place other hand motionelss in front of hand giving the motion signal (as shown)



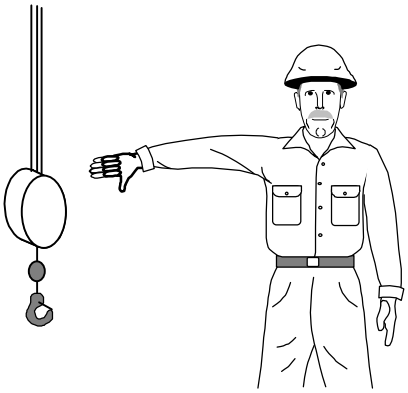
Raise The Boom And Lower The Load

With arm extended, thumb pointing up, flex fingers in and out as long as load movement is desired



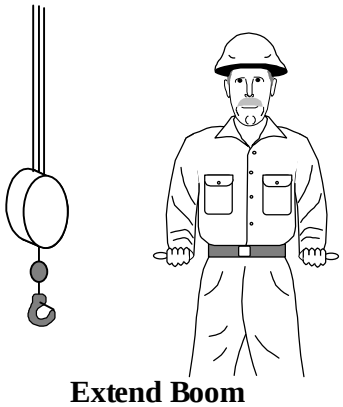
Travel

(one track) Lock the track on the side indicated by raised fist. Travel opposite track in direction indicated by circular motion of other fist, rotated vertically in front of body (for crawler cranes only)



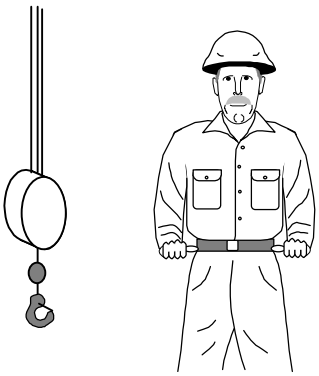
Lower The Boom And Raise The Load

With arm extended, thumb pointing down, flex fingers in and out as long as load movement is desired



Extend Boom

(Telescoping Booms) Both fists in front of body with thumbs pointing outward



Retract Boom

(Telescoping Booms) Both fists in front of body with thumbs pointing toward each other.

6.07: continued

(1) NIOSH hand Signals for Crane Operation

Retract Boom

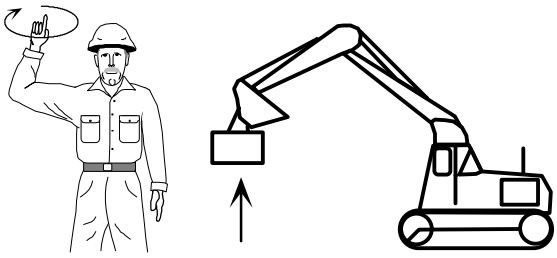
(Telescoping Boom). One hand signal. One fist in front of chest, thumb pointing outward and heal of fist tapping chest

Extend Boom

(Telescoping Boom). One hand signal. One fist in front of chest with thumb tapping chest.

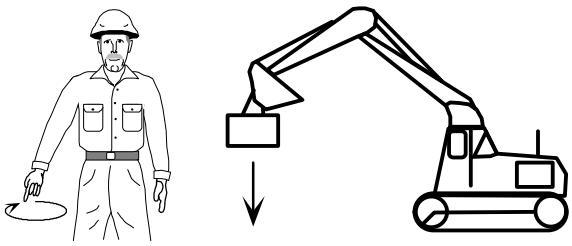
6.07: continued

(2) SAE Crawler / Excavator Hand Signals



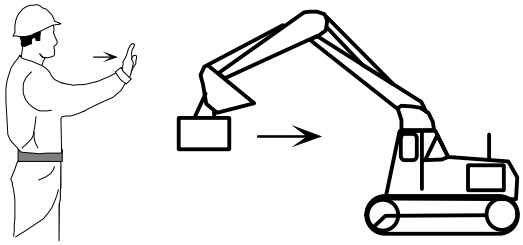
Raise Load Vertically

With forefinger vertical pointing up, move hand in small horizontal circular motion



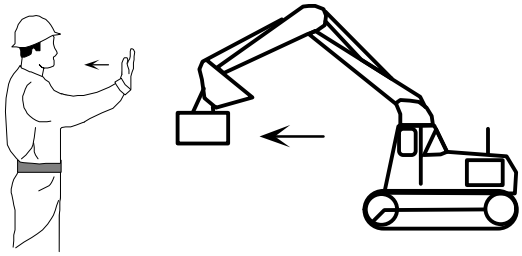
Lower Load Vertically

With forefinger vertical pointing down, move hand in small horizontal circular motion



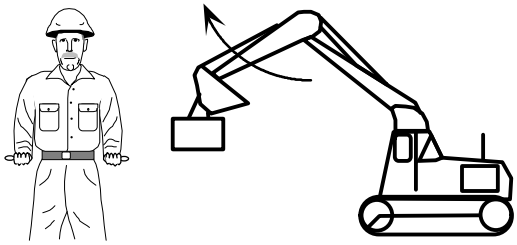
Move Load In Horizontally

With either arm extended, hand raised and open toward direction of movement, move hand in direction of required movement.



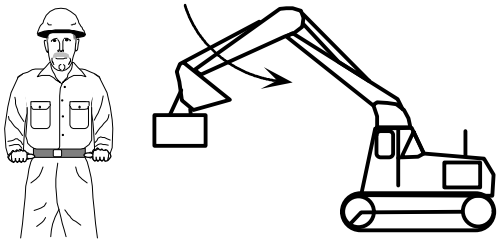
Move Load Out Horizontally

With either arm extended, hand raised and open toward direction of movement, move hand in direction of required movement.



Move Arm Outward

With both hands clenched, point thumbs outward

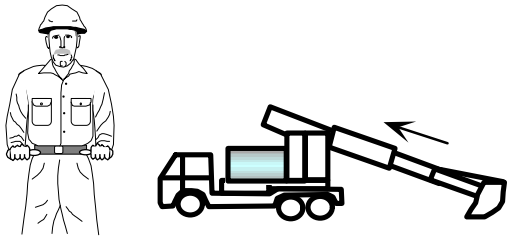


Move Arm Inward

With both hands clenched, point thumbs inward

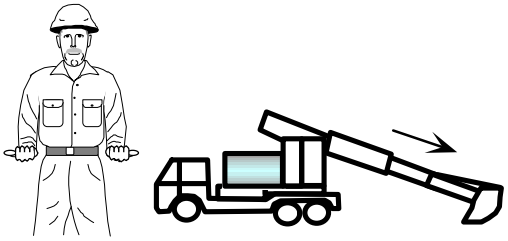
6.07: continued

(2) SAE Crawler / Excavator Hand Signals



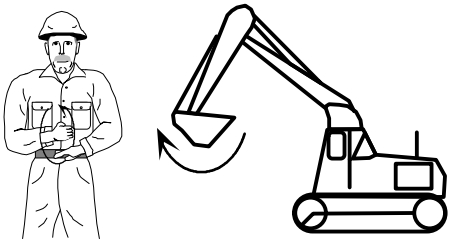
Retract Telescopic Boom

With both hands clenched, point thumbs in



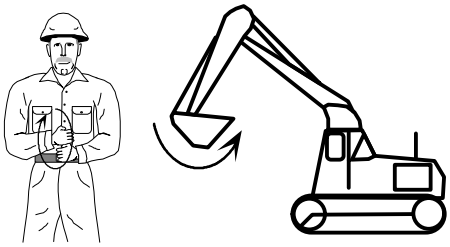
Extend Telescopic Boom

With both hands clenched, point thumbs out



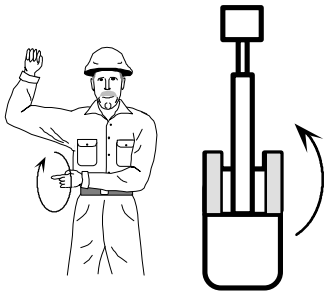
Open Bucket

Hold one hand open and stationary, Rotate other hand in small vertical circle with longfinger pointing horizontally at open hand



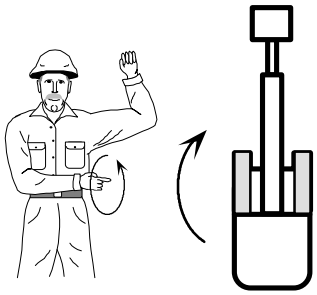
Close Bucket

Hold one hand closed and stationary, Rotate other hand in small vertical circle with longfinger pointing horizontally at closed hand



Turn

Raise forearm with closed hand indicating inside of turn. Move other other hand in circular motion point the direction of track or wheel rotation.

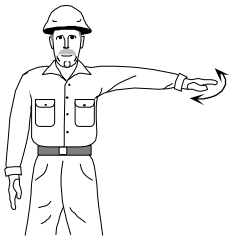


Turn

Raise forearm with closed hand indicating inside of turn. Move other other hand in circular motion point the direction of track or wheel rotation.

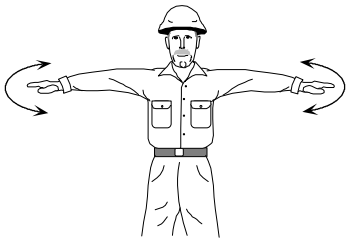
6.07: continued

(2) SAE Crawler / Excavator Hand Signals



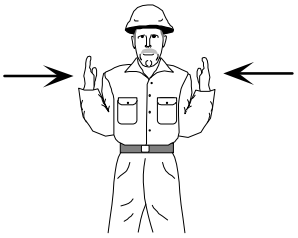
Stop

With either arm extended laterally, hands open downward, move arm back and forth



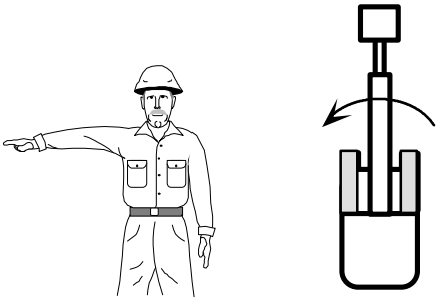
Emergency Stop

With both arms extended laterally, hands open downward, move arms back and forth



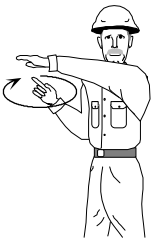
This Far To Go

With hands raised and open inward move hands laterally, indicating distance to go.



Swing (Left or Right)

With either arm extended horizontally point with forefinger to direction of swing rotation. (Swing left shown)

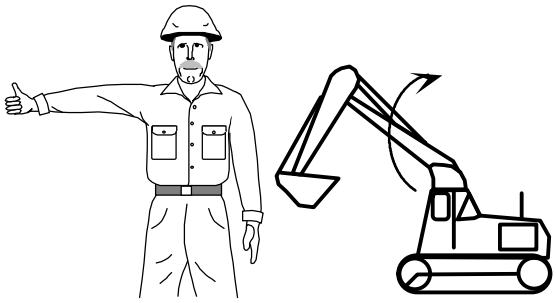


Move Slowly

Place one hand motionless in front of hand giving motion signal. (Raise load slowly is shown)

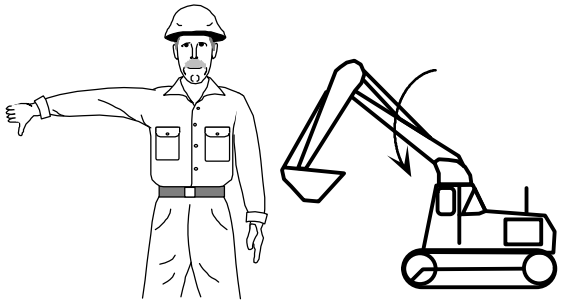
6.07: continued

(2) SAE Crawler / Excavator Hand Signals



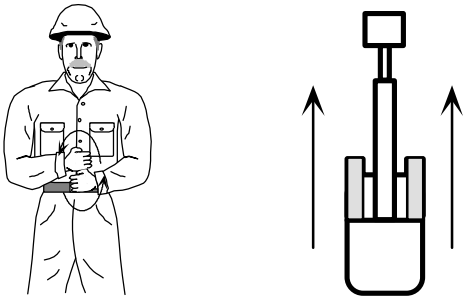
Raise Boom

With either arm extended horizontally, fingers closed, point thumb upward.



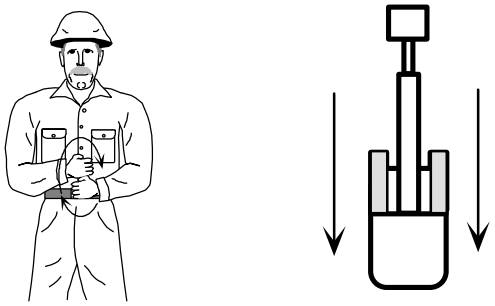
Lower Boom

With either arm extended horizontally, fingers closed, point thumb downward.



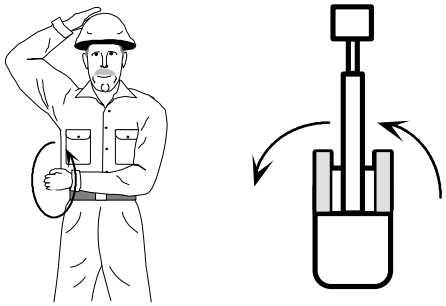
Travel

Move fists in vertical circle about each other in idrection of track or wheel rotation.



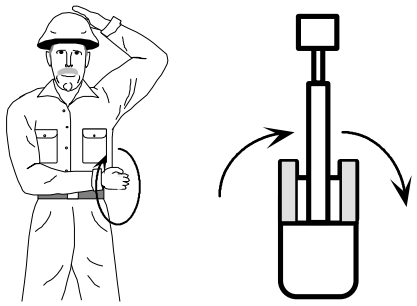
Travel

Move fists in vertical circle about each other in idrection of track or wheel rotation.



Counter Rotate

Place hand on head indicating side of reverse track or wheel rotation. Move other hand in vertical circle indicating forward rotation of other track or wheel.



Counter Rotate

Place hand on head indicating side of reverse track or wheel rotation. Move other hand in vertical circle indicating forward rotation of other track or wheel.

6.08 Conversions

Conversions from present licenses to new classes under the reclassification clause are as follows:

1. PRIOR LICENSES	NEW LICENSES
Class A Unrestricted	1A, 2A, 3A, 4A
Restrictions as applied	
Class B Unrestricted	1A, 2A, 4A
Restrictions as applied	
Class C Unrestricted	1C, 2A, 4A
Restrictions as applied	

2. PRIOR RESTRICTIONS

3B will be 4A

6:09 Application Procedure

Applications can be picked up at any Department of Public Safety Office. The hoisting application shall be completed, and returned with a $60.00 check or money order made payable to the Department of Public Safety.

No hoisting license shall be renewed unless accompanied with D.O.T certificate or documentation that shows that they meet the criteria for a D.O.T. medical examination or 1998 ANSI B30.5 qualifications for operators.

Renewals must be accompanied with the appropriate renewal fee with two(2) passport size photos.

6:10 Special Requirements for All Operators of Hoisting Machinery

1. Operators of hoisting machinery shall cease operating if ordered by an Inspector of the Division to do so.
2. Operators of hoisting machinery shall surrender their hoisting license if ordered by an Inspector of the Division to do so.
3. Any person found operating hoisting machinery without a license or proper classification of license according to 520 C.M.R. 6.06 shall immediately cease operating. Said person shall make his identity known to the Inspector of the Division with a valid motor vehicle drivers license.
4. No person shall operate hoisting machinery without a valid and current Driver's License, in accordance to the motor vehicle law.

6:11 License Suspension and Revocation

A duly licensed operator of hoisting machinery aggrieved by the action of an Inspector, pursuant to chapter 146 section 53, paragraph 5, in suspending or revoking their license to operate hoisting machinery may within 10 days appeal from such decision to the Chief who shall appoint three inspectors of the Division, or himself and two inspectors, to act together as a board of appeal. The decision of a majority of the members of the board of appeal shall be final. Any license covered under 520 C.M.R. 6.00 may be revoked or suspended for the following reasons:

1 False or misleading information on application for examination or license renewal.
2. Operating hoisting machinery under the influence of alcohol or drugs.
3. Failure to pay excise tax or other taxes.
4. Prior violations of licensing law.
5. Failure to report accidents as required by the Department of Public Safety.
6. Failure to report a fatality as required by the Department of Public Safety.
7. Operating in an unsafe manner.
8. Failure to comply with any provision of this regulation.

The Commissioner, Chief of Inspections, or any Inspector of the Division, may deny, revoke or suspend depending on the severity of the offense. An individual aggrieved by such actions may appeal to the Board of Appeals pursuant to M.G.L. ch 30A adjudicatory proceeding. Re-examination is required after revocation. Re-examination may be required at the end of any suspension.

REGULATORY AUTHORITY

520 C.M.R. 6.00: M.G.L. c. 146, 53 through 54A.